

FIG. 1

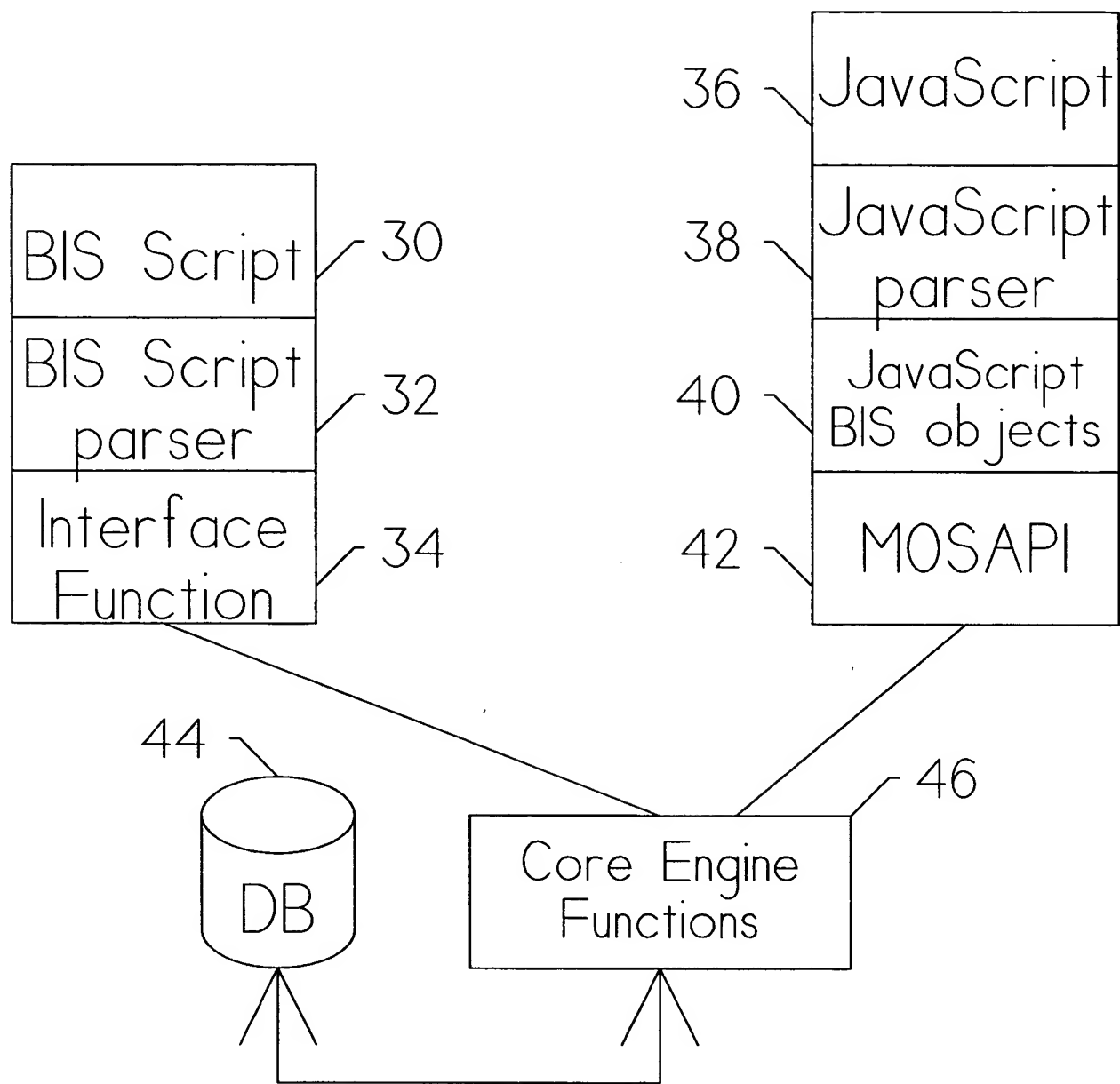


FIG. 2

# TYPICAL FUNCTIONS FOR DATASET OBJECT oDs:

```

oDs.addRecord({colVal{....{colVal50}}})
oDs.addRecords(numRecords,{colVal{....{colVal50}}})
oDs.cancelRecordUpdate()
oDs.close({bulkUpdateOption})
oDs.column[columnID].name
oDs.column[columnID].size
oDs.column[columnID].value
oDs.columnCount
oDs.copy()
oDs.create(container,oCrCols{,crReportTypes=crTemporary})
oDs.createFrom(container,source{,crReportTypes=crTemporary})
oDs.currentRecord
oDs.deleteRecords({numRecords=1})
oDs.findRecord(oFindRecordParams,recordNumber{,columnNumber{,columnPosition}})
oDs.firstRecord()
oDs.insertRecord({colVal{....{colVal50}}})
oDs.insertRecords(numRecords,{colVal{....{colVal50}}})
oDs.lastRecord()
oDs.name
oDs.nextRecord()
oDs.open(dataset-id,access{,wait=true})
oDs.overwrite
oDs.prevRecord()
oDs.RecordCount
oDs.remove()
oDs.save(container)
oDs.searchRecord(oSearchRecordParams,recordNumber)
oDs.sort(oSortParams)

//bulk update
//read only
//read only

//read only
//returns Dataset object
//creates new Dataset object
//creates new Dataset object

//read only
//read only

//controls Dataset result

//read only
//deletes dataset and Dataset object
//returns dataset ID

```

FIG. 3

## VALUE-ADD POWER FUNCTIONS FOR DATASET OBJECTS oDs

```
oDs.compareDatasets(.CompareParams.oCompareStatus)

//Dataset result is returned as controlled by the Dataset "overwrite" property
oDs.calculate(oCalculateParams{numberOfRecords{recordsProcessed}})
oDs.combineDatasets(oCombineParams{recordsFound{recordsCompared}})
oDs.find(oFindParams{recordsFound})
oDs.interval(.IntervalParams{olIntervalStatus})
oDs.search(oSearchParams{recordsFound{recordsSearched}})
oDs.tally(oTallyParams{oTallyStatus})
```

FIG. 4

```
var oSearchParams = new SearchParams():

oSearchParams.caseSensitive
oSearchParams.findNumeric.
oSearchParams.group
oSearchParams.invert
oSearchParams.maxFinds
oSearchParams.numberOfRecordsToSearch
oSearchParams.startRecordNumber

oSearchParams.columnItem[n].columnInfo("columnid{{startPos,endPos}}"){dateFormat})
oSearchParams.searchItem[n].addValueInfo(columnItem, value{,valueRange})

//Calling format
oDs.search(oSearchParams{,recordsFound{,recordsSearched{}})
```

FIG. 5

#### Partial JavaScript

```
// Search "CustCode", "StCd" and last 4 characters of the "Product Type"
// columns
. . . .
var srh = new SearchParams();
srh.columnItem(1).columnInfo("CustCode");
srh.columnItem(2).columnInfo("Product Type(6, 9)");
srh.columnItem(3).columnInfo("StCd");
srh.searchItem(1).addValueInfo(1, "amco");
srh.searchItem(1).addValueInfo(2, "box0", "box1");
srh.searchItem(1).addValueInfo(3, "ip");
srh.searchItem(2).addValueInfo(3, "ip");           //can be out
srh.searchItem(2).addValueInfo(2, "box2", "box3"); //of order
srh.searchItem(2).addValueInfo(1, "intr");
srh.searchItem(3).addValueInfo(1, "dico");
srh.searchItem(3).addValueInfo(2, "box4", "box5");
srh.searchItem(3).addValueInfo(3, "or");
srh.searchItem(4).addValueInfo(1, "arco");
srh.searchItem(4).addValueInfo(2, "box6", "box7");
srh.searchItem(4).addValueInfo(3, "sh");
srh.searchItem(5).addValueInfo(1, "amco");
srh.searchItem(5).addValueInfo(2, "box8", "box9");
srh.searchItem(5).addValueInfo(3, "or");
var nFnd = nSrh = 0;
ds2.search(srh, nFnd, nSrh);
```

FIG. 6

Equivalent MAPPER run-script:

@SRH, 0.B.2 . 2-2.20-4.45-4 \_\_.ip.'box0'.amco'/r.'ip.'boxl'.amco/'\_\_.'p.'b\  
ox2.'intr'/r.'ip.'box3.'intr/'\_\_.'or.'box4'.dico'/r.'or.'box5'.dico/'\_\_.'s\  
h.'box6'.arco'/r.'sh.'box7'.arco/'\_\_.'or.'box8'.amco'/r.'or.'box9'.amco'/\

**Results:**

*St.	Status.	By.	Product	Serial.	Product	Order	Cust.	Product	Product	Ship	Ship	Spec
*CD.	Date.	In.	Type	Number.	Cost	Number	Code	Plan	Actual	Date	Order	Code
*----	-----	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
IP	831224	LS	BLACKBOX1	436767		84389	AMCO	831223	831224			
IP	831225	LS	BLACKBOX1	436768		84390	AMCO	831223	831225			
IP	831219	LS	BLACKBOX2	637071		84353	INTR	831218	831219			
SH	831203	LS	BLACKBOX6	785367		52833	ARCO	831201	831202	831203	S8934	
OR	831217	LS	BLACKBOX9			98755	AMCO					
OR	831210	LS	GREENBOX5			99753	DICO					

$$\frac{G}{H} \nabla$$

Partial JavaScript and Sample Output for SearchParams object/Update Dataset object

```
...
var oSearchParams = new SearchParams(): //1
oSearchParams . columnItem[] . columnInfo("CustCode"): //2
oSearchParams . searchItem[] . addValueInfo(l, "amco"): //3
oSearchParams . update = true: //4
var oDsu = oDs . search(oSearchParams, recordsFound, recordsSearched): //5
while (oDs . currentRecord() != 0){ //6
    if (oDsu.column("OrderNumb"). value == "84389") { //7
        oDsu.prevRecord(): //reposition for deleted record //8
    }else { //9
        oDus.column("CustCode"). value = "abcd": //10
        oDus . nextRecord(): //11
    } //12
} //13
//14

oDsu.close(oDs, BupMerge): //15
// Available results //bulk update merge
... recordsFound //16
... recordsSearched //17
```

FIG. 8



Results at line 5 -- before bulk update:

St Cd	Status Date	By In	Product Type	Serial Number	Produc Cost	Order Numbr	Cust Code	Produc Plan	Produc Actual	Ship Date	Ship Order	Spc Cod
IP	831224	LS	BLACKBOX1	436767	13500	84389	AMC0	831223	831224			
IP	831225	LS	BLACKBOX1	436768	13600	84390	AMC0	831223	831225			
IP	831222	LS	BLACKBOX5	737582		84040	AMC0	831222	831222			
IP	831227	LS	BLACKBOX7	733597		84351	AMC0	831227	831227			
OR	831217	LS	BLACKBOX9			98755	AMC0					
SH	831204	LS	BLACKBOX9	714577		64231	AMC0	831201	831203	831204	S8531	
SH	831206	LS	GREENBOX7	669624		54682	AMC0	831201	831205	831204	S8553	
SC	840110	LS	GREENBOX8	975481		99943	AMC0	84110				
OR	830310	LS	GREENBOX9			99951	AMC0					

FIG. 9

Results at line 5 -- before bulk update:

St Cd	Status Date	By In	Product Type	Serial Number	Produc Cost	Order Numbr	Cust Code	Produc Plan	Produc Actual	Ship Date	Ship Order	Spc Cod
IP	831224	LS	BLACKBOX1	436767		84389	ANCO	831223	831224			
IP	831225	LS	BLACKBOX1	436768		84390	abcd	831223	831225			
IP	831219	LS	BLACKBOX2	637071		84353	INTR	831218	831219			
OR	840110	LS	BLACKBOX4			94754	ARCO					
SC	840110	LS	BLACKBOX5	675281		97441	FEDS	840131				
IP	831222	LS	BLACKBOX5	737582		84040	abcd	831222	831222			
SH	831203	LS	BLACKBOX0	746327		54237	FEDS	831201	831202	831203	S8738	
SH	831202	LS	BLACKBOX6	368061		54438	FEDS	831201	831201	831202	S6937	
SH	831209	LS	BLACKBOX6	777324		54232	DICO	831207	831208	831209	S8538	
SH	831203	LS	BLACKBOX6	785367		52833	ARCO	831201	831202	831203	S8934	
IP	831216	LS	BLACKBOX6	926581		89381	INTR	831215	831216			
OR	831210	LS	BLACKBOX7			99842	FEDS					
OR	831227	LS	BLACKBOX7			99725	INTR					
SC	840108	LS	BLACKBOX7	665481		97541	FEDS	840122				
IP	831227	LS	BLACKBOX7	733597		84351	abcd	831227	831227			
SH	831202	LS	BLACKBOX7	744627		44232	INTR	831201	831201	831202	S8531	
IP	831215	LS	BLACKBOX7	933581		84381	FEDS	831215	831215			
OR	831230	LS	BLACKBOX8			92788	FEDS					
SH	831203	LS	BLACKBOX8	945327		74272	FEDS	831201	831202	831203	S8518	
OR	831217	LS	BLACKBOX9			98755	abcd					
OR	831210	LS	BLACKBOX9			98782	USSC					
IP	831217	LS	BLACKBOX9	538993		84781	USSC	831215	831217			

FIG. 10

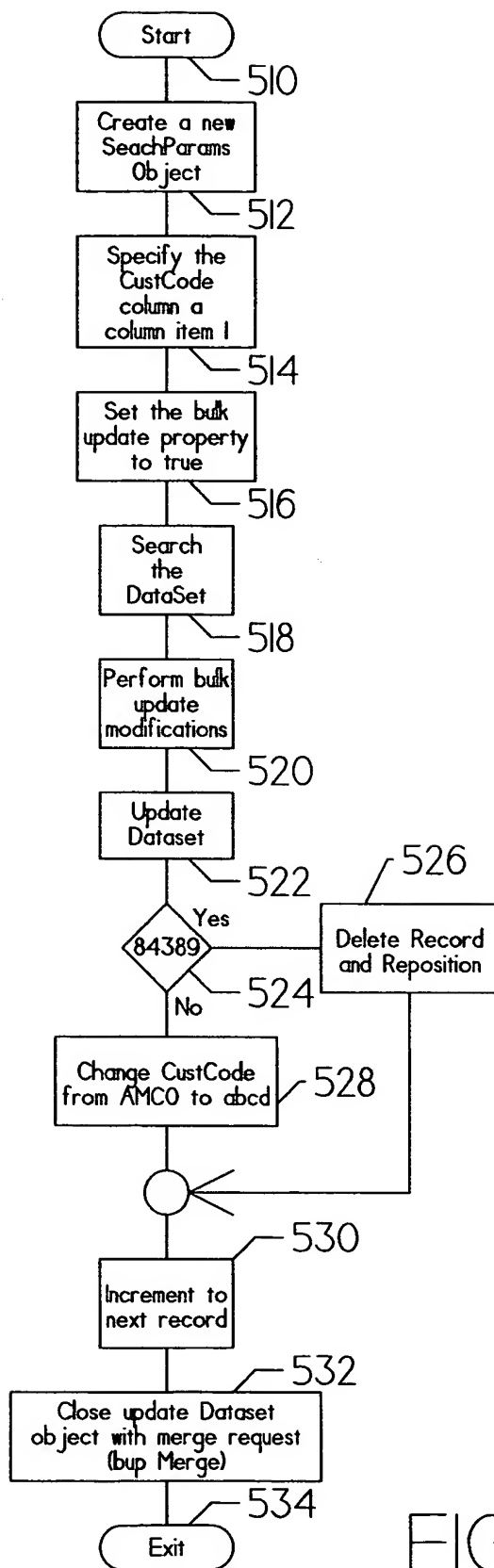


FIG. II

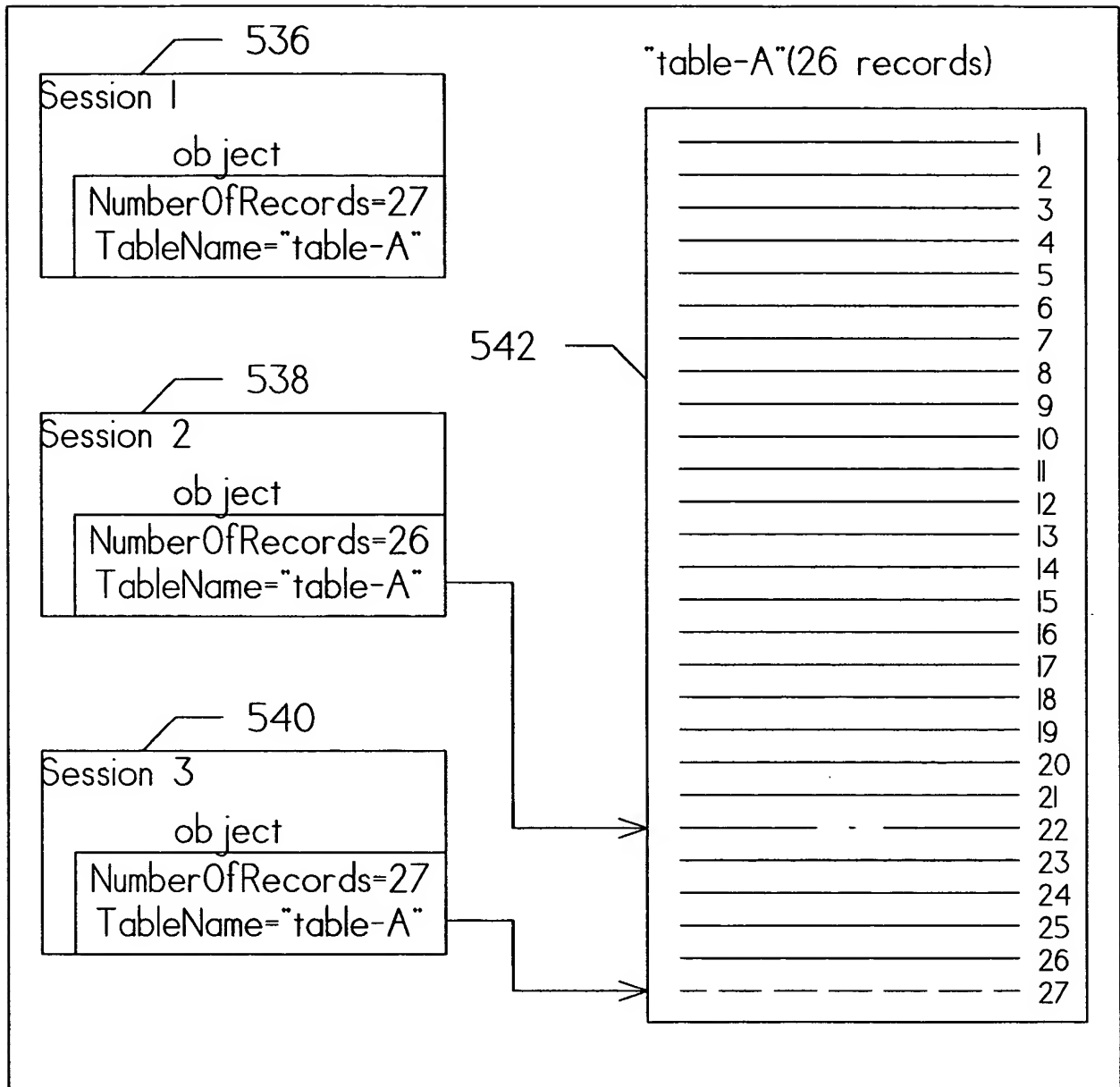


FIG. 12

Entity Event	Effect on Version property
Initial reference	Property value set to zero
Property query (non-deferred)	Current primary property value returned
Property query (deferred)	Current deferred property value returned
Begin deferred sequence	Copy primary property value to deferred property value
Update (immediate)	Increment primary property value by one
Update (deferred)	Increment deferred property value by one (primary unchanged)
Commit (deferred)	Copy deferred property value to primary property value

FIG. 3

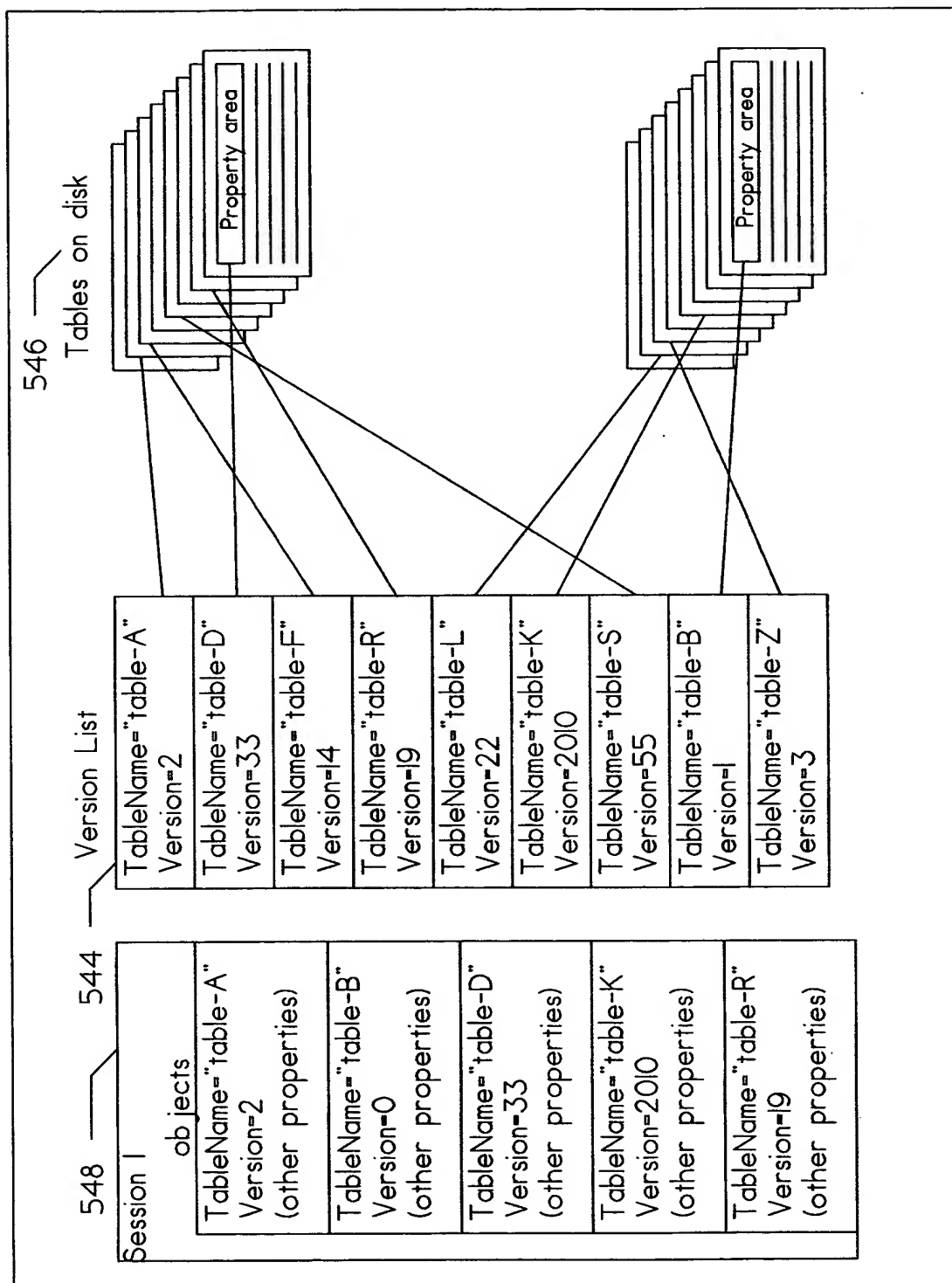


FIG. 14